

1 - A unit of flux density that is the same as a Wb/m^2 is the

- a) ampere-turn
- b) ampere-turn/weber
- c) ampere-turn/meter
- d) tesla
- Boş bırak

#: 3ddd10dd-8c9f-4f55-9422-f94b22abf6c8

2 - The cause of magnetic flux is

- a) magnetomotive force
- b) induced voltage
- c) induced current
- d) hysteresis
- Boş bırak

#: 56e916b3-9af4-4f9e-9ad2-3bc0da47754f

3 - Ohm's law for a magnetic circuit is

- a) $F_m = NI$
- b) $B = \mu H$
- c) $\Phi = F_m / R$
- d) $R = \ell / (\mu A)$
- Boş bırak

#: 76376b32-9aff-434e-858f-39265b6593af

4 - The control voltage for a relay is applied to the

- a) NO contacts
- b) NC contacts
- c) coil
- d) armature

Boş bırak

#: ff014b67-793d-47eb-a2d2-c07439dad723

5 - In North America, the frequency of AC utility voltage is 60 Hz. The period is

- a) 8.3 ms
- b) 16.7 ms
- c) 60 ms
- d) 60 s
- Boş bırak

#: 98fd52f8-ad88-4269-b132-601da79c9dd2

6 - The amplitude of a sine wave is measured

- a) at the maximum point
- b) between the minimum and maximum points
- c) at the midpoint
- d) anywhere on the wave
- Boş bırak

#: 0a0cf3c7-fdfd-4950-9dbf-8c86a38e6751

7 - An example of an equation for a waveform that leads the reference is

- a) $v = -40V \sin(\theta)$
- b) $v = 100V \sin(\theta + 35^\circ)$
- c) $v = 5.0V \sin(\theta - 27^\circ)$
- d) $v = 27V$
- Boş bırak

#: 05197925-95b3-4c42-a2f6-93308d0a2965

8 - In the equation $v = V_p \sin\theta$, the letter v stands for the

- a) peak value
- b) average value
- c) rms value
- d) instantaneous value
- Boş bırak

9 - If the peak value of a waveform is 60.0 V, the same power would be delivered to a load with a DC voltage of

- a) 21.2 V
- b) 37.8 V
- c) 42.4 V
- d) 60.0 V
- Boş bırak

#: 20da01e9-c472-4fca-9405-592a17f2f3b1

10 - A square wave consists of

- a) the fundamental and odd harmonics
- b) the fundamental and even harmonics
- c) the fundamental and all harmonics
- d) only the fundamental
- Boş bırak

#: e703bb94-d7c3-46aa-8cf1-aec77c2b9e29

11 - The capacitance of a capacitor will be larger if

- a) the spacing between the plates is increased
- b) air replaces oil as the dielectric
- c) the area of the plates is increased
- d) all of the above
- Boş bırak

#: 42ed0b16-dc73-49c2-ad0b-18833c1575ea

12 - If a 0.015 μF capacitor is in series with a 6800 pF capacitor, the total capacitance is

- a) 1568 pF
- b) 4678 pF
- c) 6815 pF
- d) 0.022 μF
- Boş bırak

13 - Two capacitors that are initially uncharged are connected in series with a dc source. Compared to the larger capacitor, the smaller capacitor will have

- a) the same charge
- b) more charge
- c) less voltage
- d) the same voltage
- Boş bırak

#: 4a1b8d5c-32b0-4c0f-8b7e-1b2721e9174b

14 - When a uncharged capacitor is connected through a series resistor and switch to a dc voltage source, the voltage across the resistor after the switch is closed has the shape of

- a) a straight line
- b) a rising exponential
- c) a falling exponential
- d) none of the above
- Boş bırak

#: 1b24cda3-a5cd-47fb-bcf8-df0cc71ecb1a

15 - The capacitive reactance of a 100 μF capacitor at 60 Hz is

- a) 6.14 $\text{k}\Omega$
- b) 265 Ω
- c) 37.7 Ω
- d) 26.5 Ω
- Boş bırak

#: 319a0168-5c52-4a23-896f-060e97e0d5c9

16 - If an sine wave from a function generator is applied to a capacitor, the current will

- a) lead voltage by 90°
- b) lag voltage by 45°
- c) lag voltage by 90°
- d) lead voltage by 45°

Boş bırak

#: 28e27295-e8d3-450a-bc02-03440d7edcb7

17 - Complex numbers can be expressed in polar form. The angle is measured from the

- a) positive real axis
- b) negative real axis
- c) positive imaginary axis
- d) negative imaginary axis
- Boş bırak

#: 62f25ec2-4faf-453b-935d-69c8bc4f9fd

18 - If a phasor that is expressed in polar form has an angle of -45° , it is in the

- a) 1st quadrant
- b) 2nd quadrant
- c) 3rd quadrant
- d) 4th quadrant
- Boş bırak

#: b43db4f8-92ad-414f-bf3a-e0b64f5c30be

19 - To multiply two numbers that are in polar form,

- a) add the magnitudes and add the angles
- b) multiply the magnitudes and add the angles
- c) add the magnitudes and multiply the angles
- d) multiply the magnitudes and multiply the angles
- Boş bırak

#: 2972ccb-8ab5-4139-87f4-d0f2c1c93e3e

20 - Given the impedance phasor diagram of a series RC circuit, you could obtain the voltage phasor diagram by

- a) multiplying each phasor by the current
- b) multiplying each phasor by the source voltage
- c) dividing each phasor by the source voltage
- d) dividing each phasor by the current
- Boş bırak

21 - If you increase the frequency in a series RC circuit,

- a) the total impedance will increase
- b) the reactance will not change
- c) the phase angle will decrease
- d) none of the above
- Boş bırak

#: ec3d6d74-ceea-4045-bd35-299441e59cd7

22 - In a parallel RC circuit, the capacitive susceptance is plotted on an admittance phasor diagram along the

- a) positive real axis
- b) negative real axis
- c) positive imaginary axis
- d) negative imaginary axis
- Boş bırak

#: 8dd57cb0-90b7-49b3-ab46-ec690f6f4549

23 - Given the admittance phasor diagram of a parallel RC circuit, you could obtain the current phasor diagram by

- a) multiplying each phasor by the voltage
- b) multiplying each phasor by the total current
- c) dividing each phasor by the voltage
- d) dividing each phasor by the total current
- Boş bırak

#: 70287388-a2ed-4dcb-9583-365bc69b7b99

24 - If you increase the frequency in a parallel RC circuit,

- a) the total admittance will decrease
- b) the total current will not change
- c) the phase angle between resistor current and source current will decrease
- d) none of the above
- Boş bırak

25 - The magnitude of the admittance in a parallel RC circuit will be larger if

- a) the resistance is larger
- b) the capacitance is larger
- c) both a and b
- d) none of the above
- Boş bırak

#: f8a35066-867a-4c87-aa94-8b0012ec367a

26 - The maximum power factor occurs when the

- a) circuit is entirely reactive
- b) reactive and true power are equal
- c) circuit is entirely resistive
- d) product of voltage and current are maximum
- Boş bırak

#: 3a67cecf-e902-4448-87e7-411e87b58c92

27 - Assuming all other factors are the same, the inductance of an inductor will be larger if

- a) more turns are added
- b) the area is made larger
- c) the length is shorter
- d) all of the above
- Boş bırak

#: a592c7e0-068d-4cda-a09c-377744671a66

28 - The henry is defined as the inductance of a coil when

- a) constant current of one amp develops one volt.
- b) one volt is induced due to a change in current of one amp per second.
- c) one amp is induced due to a change in voltage of one volt.
- d) the opposition to current is one ohm.
- Boş bırak

#: ac293dbd-ec4c-48ca-94ac-b2073ca63cc1

29 - The total inductance of a 270 μH inductor connected in series with a 1.2 mH inductor is

- a) 220 μH
- b) 271 μH
- c) 599 μH
- d) ~~1.47~~ μH 1470
- Boş bırak

#: c8915d5c-097e-431e-9821-181df02133da

30 - The total inductance of a 270 μH inductor connected in parallel with a 1.2 mH inductor is

- a) 220 μH
- b) 271 μH
- c) 599 μH
- d) 1.47 μH
- Boş bırak

#: 876cea31-aa2b-4fbf-92c3-d0be48a73790

31 - When an inductor is connected through a series resistor and switch to a DC voltage source, the voltage across the resistor after the switch closes has the shape of

- a) a straight line
- b) a rising exponential
- c) a falling exponential
- d) none of the above
- Boş bırak

#: a8d85613-69ca-4820-b6a4-9da1bcc22767

32 - Consider an RL series circuit with a 10 V input voltage of square waveform, a 270 μH inductor, and a 1.0 k Ω resistor. The time constant is

- a) 270 ns
- b) 270 μs
- c) 270 ms
- d) 3.70 s
- Boş bırak

#: fb651087-cd8b-4477-894f-e54c8df09ea7

33 - If a sine wave from a function generator is applied to an inductor, the current will

- a) lag voltage by 90°
- b) lag voltage by 45°
- c) lead voltage by 90°
- d) lead voltage by 45°
- Boş bırak

#: c1834d27-b88c-4354-9250-0064a8dcf63a